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ATTENTIONS TO THE NEW-BORN CHILD: CONGENITAL DEFORMITIES.

NOTES OF A LECTURE AT HARVARD MEDICAL SCHOOL.

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MORE especially with the child of a first pregnancy, it will be a little remarkable if you are not asked, even before the child is separated from the mother, "Is it perfect? Are there any marks upon it?" These questions I always answer, "I have not had time to examine yet." Indeed, I never intend to examine until after the placenta has been removed. If there be any malformation, too early announcement of it may be productive of fatal result to the mother. A hæmorrhage caused by depression, consequent upon unpleasant news, is by no means uncommon; and a hæmorrhage, even a slight one, may unexpectedly result fatally. Concerning what are usually called mother-marks, the result of so-called "longings," or of frights during pregnancy, I assure you that I never yet saw one when I had asked, previous to the delivery, if anything of the kind were anticipated. For years it was my habit to ask the question before labor began, "if any marks were expected." Never but in one instance did I have an answer in the affirmative which was followed by any appearance like that which was expected. The case was this. Mrs. — said to me that when about six months pregnant, while she was at the theatre, a man upon the stage was apparently shot just above the nose, and the blood flowed from the spot. She knew that her child was marked by it. To my astonishment, when the baby was born, there was a red spot covering the lower part of the forehead, between the eyes and down upon the nose. Of course, I had no explanation to make. On the following day, however, the patient's mother relieved me very much when she came into the room, uncovered the little one to look at it, and exclaimed, "Why, Eliza, she's got just such a mark as you had when you were born." It was an inherited spot, and, like very many of these marks, faded away as the child grew older. I have seen spots of all shapes and shades, red and brown and even green in color, but I never yet saw one when and where it was expected, if the mother were questioned in advance. It

the matter were left till after the labor was over, there has always been an explanation found.

As a rule, one of these spots is of very little consequence, even when there is a moderately large plexus of vessels forming it. They are very apt to fade out towards the close of the first dentition, although left entirely alone. In some cases, it is true, they are so vascular as to be dangerous if in exposed situations; unless they are so situated, and are quite large, my advice would be to let them alone.

There are certain malformations, however, which should be attended to early. There is, for instance, the imperforate anus. This is sometimes simply covered by a fold of skin, which being perforated everything goes on well enough. Sometimes there is an obstruction above the sphincter, which may easily be overcome. Sometimes there is a want of connection between the lower and the upper parts of the rectum, the communication from above being with the urinary bladder. I have operated with success even in one of these cases, and I know that the child lived to the age of puberty, apparently well. During the past few years I have heard nothing of him, as he has removed from the city.

The hare-lip is another abnormality which sometimes requires very early attention. The time for interference is of course dependent upon the amount of deformity. The existence of supernumerary fingers or toes may render it necessary for you to know and speak early. Strabismus to a certain extent is not very uncommon; but very often indeed what is seen is a general weakness of different muscles, rather than a positive shortness of any one muscle, and it usually rectifies itself if let alone. But all of these affections, as well as the different forms of club foot, which can generally be treated early with success, and without operation, are matters to be spoken of elsewhere.

I cannot avoid speaking, however, of one matter which more than half of the young mothers are troubled about. That is tongue-tie; the short *frænum* of the tongue. It is very frequently spoken of by nurses, often asked about by mothers, and yet it very seldom has existed to a degree requiring interference in patients who have fallen under my observation. Want of patience with a child who has been unseasonably and improperly fed, and who consequently finds it easier to swallow from a spoon than to nurse from a nipple — this is the history of most cases of supposed tongue-tie. If the child, when you put your little finger in its mouth, can draw upon it, there is no tongue-tie. If the child, when you are examining it, after feeding gapes and puts its tongue upon the lip, or draws it back so that you can see the *frænum*, there is no tongue-tie. If there be a tongue-tie you will find, when you open the little fellow's mouth, that the organ is not only bound down to the jaw, but also that it has the appearance of being stitched through vertically, as it were, so as to look as if there were a bisection of it.

One word more concerning abnormalities and deformities at birth. "Doctor," once said a man to me, "if my child is not perfect it must not live." I find that I am not the only one to whom this, or something equivalent, has been said. It is not for you and a father to estimate the amount of deformity that a child is to be permitted to live with. The object of the physician is to save life. In the practice of the best qualified of us there will be sometimes errors of judgment, and with a large practice only the most conceited and ignorant man would say that he has never lost a patient who might have been saved. It is hard enough for us to know this; but deliberately to listen to a proposal to let a child die is only one step on the road to a worse crime. What course should you take? Why, put on your hat and bid the premises "good morning."

A RECENT EXANTHEMA; WHAT IS IT?¹

BY CHARLES W. SWAN, M. D., OF BOSTON.

THE following cases have been observed in rapid succession, principally at the South End of Boston, in the practice of two physicians. Others are now reporting similar cases, and there is no doubt that the disease, whatever one may choose to call it, is epidemic. It is proposed to offer the specimens before proceeding to a consideration of the claims of this form of exanthema to a distinctive name.

CASE I. — Girl aged eleven, seen February 9th. The report was that she had taken cold on the 5th from exposure in thinner dress than she had been accustomed to wear. On the evening of that day she complained of feeling cold. The next day, the 6th, there was a maculate eruption on the neck, anteriorly; in the evening it was observed on the legs; on the morning of the 7th it was general and very abundant, and on the morning of the 8th it had almost entirely disappeared. Many of the points were described as of the size of a pinhead, and the skin was slightly roughened. With the eruption came a puffy, swollen appearance about the eyes, and immediately after the skin became clear again there came complaint of stinging pain and tenderness in numerous posterior cervical lymphatic glands, which were moderately but very perceptibly enlarged; and following close upon this was sore throat. A very slight cough began and continued with the other symptoms, the eyes were watery, but there was no running at the nose. The patient was not confined to bed, and the appetite was simply somewhat impaired. At the visit on the fourth day of the disease, the fauces and soft palate were reddened, and the latter exhibited numerous raised, reddish points. The tongue was nearly clean. The principal

¹ Read before the Boston Society for Medical Observation.

complaint was of the enlarged glands of the neck, but the tenderness of these had already begun to subside.

On the 24th, eighteen days from the beginning of the attack, the appearance of the throat was much the same, and the lymphatic glands had not yet fully subsided, although there was no longer complaint of either.

Four years ago this patient had well-marked measles, followed, after a short interval of apparent health, by mumps. She had never had scarlet fever.

CASE II. — Girl aged three years. She was seen February 20th. It was reported that two days before, the 18th, she had had an eruption on the neck and back, and on the 19th a decidedly red, blotchy eruption on the face. From the description it was rubeoloid, except that the precise form of the blotches had not been noticed. The eyes were pinkish and watery ; no running at the nose. The eruption was not over twenty-four hours in duration, and it began with the other symptoms. The slight dry cough which was present did not precede the eruption. There was no dysphagia. Numerous posterior cervical glands were enlarged, and there was a lumpish feeling under the right jaw. There was a little puffiness about the eyes early in the attack. She was not much sick at any time. The appetite was only slightly impaired. Two years ago this patient had well-marked measles, preceded by chicken-pox.

In the same house with the patient just described are two children whose histories are as follows : —

CASE III. — A well-nourished boy, seventeen months old, had a maculate eruption February 10th. It was in the form of small dots, and was slightly rough to the touch. The color was paler and less intense than that of ordinary measles. When discovered, in the morning, it was already general, excepting, perhaps, the feet. It was nearly gone on the Friday or Saturday following, but for some time afterward faint spots were visible when the child cried or awoke. There were no prodromata. After the eruption appeared the child was a little restless and hot for two nights, but in the day-time he did not behave at all like a sick child. The catarrhal symptoms, if any, were very slight. No enlargement of the posterior cervical glands was observed. There was no desquamation.

This same child began to cough February 25th, two weeks after the appearance of the above-described eruption, and on the following day, the 26th, there was a spotted eruption on the neck, and on the 27th a nearly general breaking out, the legs alone being unaffected. The whole aspect of the case was that of common measles. Some of the maculae were distinctly crescentic. The scalp was invaded. The fauces were reddened, and the catarrhal symptoms were quite prominent. Moreover, the child was now sick.

CASE IV. — Sister of the preceding patient, aged eight years. This little girl had scarlet fever, without eruption, at the age of three; that is, there were at the time well-marked cases of scarlet fever in the family. There was moderate sore throat, and dropsy followed.

When measles occurred in the family a year and a half ago, this patient had slight catarrhal symptoms, but no rash. Six weeks ago she had a rash which lasted four or five days. It was maculate and in general features resembled measles, but it was the first symptom of disease, the child having been perfectly well up to this time. With the eruption the eyes were but slightly affected, and the general health and appetite were almost as good as usual. When the eruption declined, cough appeared, and some running at the nose followed. There was no desquamation. The patient, subsequently to this attack, did not appear to have quite her usual vigor, and on February 15th, about a month after the disease above described began, she had an eruption of true measles. This was preceded for two days by cough, and for a week by some nasal discharge, which was at times slightly bloody. The catarrhal symptoms began to subside when the eruption reached its height, but traces of a well-developed attack were visible on the date of the visit, February 27th. On that day were enlarged posterior cervical glands of unknown duration, and a circumscribed swelling of four days' duration under the right jaw.

Dr. C. E. Buckingham, of this city, has kindly furnished me with the following brief notes of similar cases occurring in his own practice.

CASE V. — February 13th; a boy, aged nine. Breath offensive. Eruption on face somewhat like measles, more distinct, not crescentic. Stomach somewhat disturbed. Enlarged posterior cervical glands. Have seen this child with the same eruption twice before.

CASE VI. — February 14th; a girl, aged five. Had measles within a year. Never had scarlet fever. Has had an eruption without any other sign of sickness, except a slight collection of tears, for thirty-six hours past. It looks like neither measles nor scarlatina. It is in all parts of the body, in points larger than scarlet-fever points, but not shaped like measles. No soreness of the throat. Appetite good. Tongue clean.

CASE VII. — February 15th; girl, fifteen years old. Was well on the 13th. Headache with slight nausea on the 14th, and in the evening a slight eruption came on the face, which to-day covers the entire body, and is also to be seen in the throat. It is more distinct than the eruption of scarlet fever, smaller than that of measles, and not crescentic. No appetite of consequence until supper-time yesterday. To-day, ate a good breakfast.

CASE VIII. — February 15th; girl, aged nine. This child is broken out precisely as in the preceding case.

CASE IX. — February 24th; boy, fifteen years old. Slight red erup-

tion on the cheeks and behind the ears, a few spots only, rather round, and not at all crescent-like. Eyes slightly troublesome. Appearance in the throat is that of scarlatina, which disease he has had. Soft palate shows raised red points; posterior pharyngeal wall red. No white patches on tonsils. A little dysphagia and slight fever on the morning of the eruption, but neither symptom at visit in the afternoon. Posterior cervical glands slightly enlarged and tender. But little appetite. No sneezing. No prodromata. Has had measles. There was no subsequent visit. At the time of this attack the patient was nearly over an attack of acute bronchitis, which was attended with an elongated uvula.

CASE X. — Girl, aged six. Seen March 1st. Has never had scarlet fever. Had measles five years ago. Abscess in the right ear broke February 27th, and a small boil on the left cheek broke yesterday. An eruption came out to-day on face, arms, and whole trunk, rubeoloid in appearance, not crescentic. No cough. No trouble in eyes. Throat scarlet-fever-like. Tongue clean at tip and edges; no enlarged papillæ. Posterior cervical glands enlarged. Appetite better this morning than it has been. Pulse 120. No thirst.

CASE XI. — Girl, aged six. Seen March 7th. Under the weather since the 4th; appetite poor during that interval, but it has returned to-day, and seems ravenous. Three spots noticed on the face on the 6th. To-day, patient is broken out with points all over face and body, both back and front; on the face the points run together; the eruption is less on the thighs, very little on the legs, moderately on the arms and hands; palms not affected. Occasionally broad round blotches, and infrequently on the face a large crescentic patch. Back looks more like scarlet fever in its form. Throat red generally. Tongue white, but without the enlarged papillæ of scarlet fever. A very few enlarged but small cervical glands posteriorly. Eyes slightly injected. No cough. No râles. No puffiness about face or eyes. Pulse less than 80. Skin cool. Bowels in good order. Patient had measles two years ago; never had scarlet fever.

Remarks. — If we group the most obvious and constant facts in the foregoing cases we have: a maculate rash of short duration, very slight catarrhal symptoms, little constitutional disturbance, no prodromata, an epidemic occurrence among children. In addition to these we may note the frequent occurrence of the following symptoms: sore throat; enlarged and tender posterior cervical glands; a pale red, dotted, and not crescentic eruption, suddenly general in its appearance, or rapidly extending from above downwards, or, it may be, limited to the face; impaired appetite, or nausea; lachrymation, puffiness about the eyes, slight irritation of the conjunctiva; moderate discharge from the nose; trivial cough.

The catarrhal symptoms were never severe, and part or all of them were sometimes absent. They never preceded the rash. The sore throat, if present, was moderate; there was some dysphagia, with redness of the fauces, and in some cases a punctate redness of the velum palati. In the first case reported, the posterior wall of the pharynx was coarsely papulate or uneven for several days. The numerous enlarged posterior cervical glands were noted in seven of the eleven cases, and were sometimes a subject of chief complaint. There is no proof, except of a negative character, of the absence of these in the remaining cases. The eruption was slightly crescentic in one case only out of seven carefully examined for this character. In other respects there was a notable similarity in form, the spots being generally discrete, finer than those of measles, coarser than the fine dotting of scarlet fever, paler than either in color, and not followed, so far as observed, by desquamation. The rash was generally the first noticed symptom; but in one case the patient complained of cold the evening preceding the eruption; in another there was headache and nausea in the morning, the efflorescence occurring in the evening of the same day; in a third case there was slight sore throat the day before the eruption, and in another the child had been "under the weather" for about three days, but without specific symptoms.

With scarcely an exception there was no disposition on the part of the patients to lie abed, or even to remit the ordinary amusements. The fever, if any, was very slight. No vomiting was reported. The tongue was sometimes clean, sometimes moderately coated; there were no enlarged papillæ.

Previous diseases were, in six of the eleven cases, measles; in two, scarlet fever; in one, varicella; of these, one (IX.) had had both scarlatina and measles, one (I.) measles and mumps, one (II.) measles and varicella, and in one case the child had had "the same eruption twice before." In two children, brother and sister, living together (III., IV.), the disease was *followed* by well-marked measles, in sixteen days and four weeks respectively.

In eight of the first nine cases reported the rash appeared between the 6th and 24th, inclusive, of February. The earliest occurrence noted was January 16th, and the latest, at date of writing, March 6th. Eight of the patients were girls and three were boys. The ages were from one and a half to fifteen years.

It is not proposed to draw a finer comparison than has already been made between this group of imperfectly described cases and the eruptive diseases which they resemble. A differential diagnosis will hardly be found in a very close examination of any one of the individual features of a single case. But a comprehensive survey shows a series of unselected cases so consistently related to each other in symptoms, degree

and course, and in time and place of occurrence, and also so consistently different from the types of scarlet fever and measles, as to appear, whether considered alone or in comparison, *sui generis*, having a type of their own, namely, that of rubeola (rötheln, German measles), as described by the authorities. In the cases in question there is an unexpected suddenness of efflorescence, a prominence of throat symptoms, a degree of glandular affection, an absence of prodromata, a peculiarity in the form of the maculæ, an independence of the prophylactic power of measles, all of which characteristics are in more or less *direct* opposition to the view that this is simply a mild form of measles; while the absence of many of the peculiar features of scarlatina — as, for instance, the condition of the tongue and palate, the eruption, desquamation, absence of catarrh, occurrence of prodromata — makes it quite as little likely that we have to do with a modification of the latter disease. The difference in kind, in other words, is strong, as well as the difference in degree. In favor of the name roseola is the appearance and ephemeral character of the eruption; but this disease, or phenomenon, so abounds in variety of causes, that, to be accurate, one might be compelled to use the term "epidemic catarrhal contagious roseola" to express his idea.

The account of rubeola in Ziemssen's Cyclopædia is complete and satisfactory, and may be supposed to represent the present state of knowledge upon the subject. The description of an epidemic or epidemics in the vicinity of Boston several years ago, by Dr. Cotting,¹ evidently comprehends the same disease, and gives it the name of "German measles." There is also an account of an epidemic in New York, in 1873-74, given by Dr. J. Lewis Smith in the *Archives of Dermatology* for October, 1874.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.²

BY R. H. FITZ, M. D.

PATHOLOGY.

The Origin of Giant Cells. — These bodies, first discovered by Robin in bones, and called by him "plaques à plusieurs noyaux," have attracted considerable attention, more particularly on account of their supposed intimate connection with tubercles, of which they are so frequently found to be a constituent.

Friedländer³ gives a detailed account of their appearance under nor-

¹ Boston Medical and Surgical Journal, 1873, lxxxviii. 485.

² Concluded from page 443.

³ Berliner klinische Wochenschrift, No. 37, 1874.

mal and pathological conditions, and explains at some length his idea of their relation to tuberculosis. He admits that they may arise from the enlargement of epithelial and endothelial cells, associated with an increase in the number of nuclei; also during the acute atrophy of fat tissue with a like increase of nuclei, as observed by Flemming.

Though the fact is accepted that they may be present within vessels, Friedländer does not accept the theory of their origin in such places. In tubercles, particularly, such has not been demonstrated, despite the many attempts to prove their origin here from the endothelium of the blood and lymph vessels. Wandering giant cells have been discovered in bones by Rustitzky, and Friedländer has observed an active change of shape in those present in tubercles.

Ziegler¹ has been able to produce these giant cells from white blood corpuscles. Small pieces of glass of various shapes were taken, their edges and angles rounded, and a bit of thin glass of corresponding size was so cemented between the plates that a capillary space was obtained, freely accessible from without. These were then placed beneath the skin and the peritoneum of dogs and rabbits, or were carefully introduced into one of the great cavities of the body, with the idea that the white blood corpuscles might enter the space between the pieces of glass and undergo certain changes. It was expected that at the outset nutriment might be derived from the surrounding lymph, and that later the new formation of vessels might take place, and thus eventually a fibrous tissue be formed. Should such an event occur, it would be certain that the white corpuscles had served as the formative material.

After numerous experiments his expectations were realized. The plates usually remained in position from ten to twenty-five days, were then removed, exposed to staining fluids, and were eventually preserved in glycerine. In all cases white corpuscles entered the capillary space, and underwent retrograde or progressive changes. The latter were twofold in character, and consisted in the formation of a reticulated tissue containing epithelial cells and numerous giant cells; the resemblance to the structure of tubercle was most striking, and when the giant cells occurred vessels were not found. The other change was due to the formation of connective tissue and vessels.

From the similarity of the results of the first change to certain forms of tubercles, Ziegler concluded that the tubercle with its giant cells is an inflammatory growth in which the white blood corpuscles collect at certain points (probably intracanalicular), and become peculiarly developed. This seems to be dependent upon a feeble nutrition of the cells, since the same does not suffice to form a new connective tissue. The giant cell is therefore regarded as the incomplete new formation of cells.

¹ *Centralblatt für die medicinischen Wissenschaften*, No. 51, 1874.

Jaundice. — Legg¹ and Audigné² have made experiments with reference to mechanical jaundice, produced by the ligature of bile-ducts, the former on cats, the latter on dogs. The cats died within twenty days, but not from peritonitis. Conjunctival jaundice came on late, from ten to fourteen days after the operation. The urine was not tested for bile-pigment, as that of cats and dogs often contains the same under normal conditions. Audigné states, however, that it becomes evident in the urine within two or three hours after the obstruction of the excretory ducts, though jaundice of the skin is appreciable only some time after the appearance of the pigment in the urine.

Legg observed that the sugar was absent from the urine, puncture of the fourth ventricle being made on the sixth day after the ligature of the ducts. He states further that the interstitial tissue of the liver became increased after this experiment, and that the liver-cells were atrophied but not particularly pigmented.

Nothnagel³ found casts in the urine of jaundiced persons, the icterus being marked, and bile-acids present. These casts were generally hyaline, varying in shape and size, but were not colored yellow. Albumen was present or absent.

Feltz and Ritter⁴ injected fresh bile into the veins of animals, and observed the following effects: —

Tetaniform convulsions, followed by coma, loss of sensibility, and death, when the doses were large; a slight diminution of the pulse, and a falling of the temperature from one to two degrees; decided salivation, bilious vomiting, and, at times, bloody diarrhoea. Fat globules, and an increase of fat and cholesterine were found in the blood; the blood corpuscles showed a tendency to run together, and when shaken with oxygen would not take up so much as usual, though the oxygen was diminished, and the carbonic acid increased. The amount of urine was increased, but contained albumen and biliary coloring matter only when very large doses were given; soon after the injection the urine regularly contained a substance strongly resembling indican; when the animal died early, the urine was of a bloody color from the presence of soluble blood coloring matter.

PATHOLOGICAL ANATOMY.

Results of Injury to the Brain. — Nothnagel⁵ states that by injury to certain portions of the surface of the brain of rabbits (in the vicinity of the furrow upon the same) by means of a needle, hæmorrhages into

¹ St. Bartholomew's Hospital Reports, ix. 161.

² Gazette Médicale, No. 1, 1874; Revue des Sciences Médicales, iv. 103.

³ Deutsches Archiv für klinische Medicin, 1873, page 326.

⁴ Comptes Rendus, lxxviii. 1445; Centralblatt für die medicinischen Wissenschaften, li. 814.

⁵ Centralblatt für die medicinischen Wissenschaften, 1874, page 209.

the lungs occur. These are often so extreme that almost the entire lung is affected. The observations of Brown-Séquard relate to injuries to the base of the brain. Further, a meningitis can regularly be produced; such is usually double, rarely upon only the side of the injury, at times upon the other half alone.

Hypertrophy of the Brain. — Landouzy¹ reports the case. The child, ten years old, well developed, and intelligent, had never had paralysis nor convulsions; possessed an enormous skull with closed sutures and fontanelles. The brain fitted the skull completely; its convolutions were flattened, the membranes normal, the ventricles narrow. The cerebral substance was very heavy; from the greater development of the frontal and sphenoidal lobes the convexity of the brain was greater in front than behind. All the diameters of the brain were increased, and its weight was nearly nine ounces more than that of the brain of an adult.

The various parts of the brain were apparently normal and proportionally developed. The microscopic examination presented nothing abnormal.

The child was born with a large head, walked at the age of fourteen months, learned to talk at the usual time; and no disease occurred which could be considered a cause for the hypertrophy. Hence a congenital disposition to hypertrophy of the nervous tissue must be accepted.

Lung destroyed by Phthisis. — The case is recorded by Clark.² The left half of the thorax was very much diminished in size, and was filled by the emphysematous right lung, the heart, and a hard mass — two and a half by three inches — “lying against the side of the spinal column, between the second and fourth ribs, firmly adherent to the posterior portion of the thoracic wall.” This mass was composed of cheesy matter, pigment, the remains of smaller bronchi, and fibrous tissue covered by a smooth membrane, the thickened pulmonary pleura. A large bronchus proceeded from the mass, but the remains of the lung could not be inflated through this, and there was no evidence of air cells. The right lung was tuberculous; also the left parietal pleura. There were tubercles of the liver and spleen. The right ventricle was soft and flabby; a nodule of hæmorrhagic infarction was found in the liver.

Hypertrophy of the Heart. — Ziclonko³ has studied experimentally this condition, as well as that produced by direct irritation of the heart. A ligature was placed about the aorta of frogs and rabbits, or a needle was introduced into the wall of the ventricle. The latter method in many cases was without result. The enlargement of the

¹ Gazette Médicale, 1874, No. 26; Centralblatt für die medicinischen Wissenschaften, 1874, page 826.

² The Medical Record, 1875, page 1.

³ Virchow's Archiv, 1874, lxii. 29.

heart was determined by measurements, and by means of the microscopical appearances.

The question then arose whether the hypertrophy was due to the enlargement of already existing cells, or to a new formation of cells, or to both causes. The results of the observations enabled him to state that when the aorta of frogs was constricted by a ligature and but little inflammation followed, an enlargement of the heart was present, due to an actual increase of the muscular substance. Such an increase is relatively greater in young frogs than in old ones. The enlargement is not due to an increase in the size of all the cells, rather to an increased growth of young cells and an increase of free nuclei. The only conclusion from the experiments on the rabbits was that an increase of the cardiac muscle of a certain rabbit was not due to an enlargement of all the cells.

He further endeavored to ascertain the relation of the muscle to nutrition, to the age of the individual, and to the work accomplished by the muscle. The last two factors were determined by measurements of corresponding muscle-cells of fœtuses, children, and adults, and of those from the less active muscles of the same individual.

The effect of nutrition was determined by measurements of the diameters of the fibres from the relatively inactive auricular muscles of decrepit women and well-nourished men of the same age. He concluded that, though the work accomplished by the muscles may influence the size of their fibres, nutrition and age are of much greater influence. A diminution of the diameter of the muscle-cells is alone sufficient to explain the diminished volume of the heart in atrophy.

The size of the muscle-cells of the heart depends on age, general nutrition and inflammatory processes in the heart, and is not increased in hearts hypertrophied from additional work. It is further suggested as possible that hypertrophied hearts found in aged people date rather from an earlier period of life, and that dilatation of the heart alone takes place in old age.

Primary Sarcoma of the Thoracic Aorta. — A case regarded as one of this nature was observed by Brodowski.¹

The tumor was seated in the posterior mediastinum, intimately adherent to the aorta and surrounding the same, but easily separated from the œsophagus, diaphragm, pleura, and vertebræ. The growth seemed to belong to the external coat, though the interior was correspondingly altered, the two being separated by the middle coat, which was very much thinner than normal, having undergone sarcomatous degeneration. There was no evidence of secondary nodules in the thorax, but in the abdomen they were very numerous, not only upon the peritoneum but in the gastric and intestinal mucous membrane, in the spleen, kidneys,

¹ Wiener medizinische Presse, 1874, page 214.

liver, and pancreas. The tumor presented the structure of a spindle-cell sarcoma, and the nodules in the abdominal organs were regarded as of embolic origin.

Pancreatic Hæmorrhage a Cause of Sudden Death.—At the last annual meeting of the German naturalists and physicians at Breslau, Zenker¹ reported three cases of hæmorrhage into the pancreas. The first was that of a man aged forty-eight years, who, previously well, awoke with a feeling of nausea and discomfort, and died within a few minutes. The only anatomical explanation of sudden death found at the autopsy was a marked hæmorrhagic infiltration of the entire pancreas and the neighboring connective tissue, together with hæmorrhage into the duodenum. The pancreas also presented an extreme degree of fatty degeneration.

The second case occurred soon after. A man aged twenty-eight years, an epileptic, though otherwise apparently healthy and able to work, was found dead in the forest, where he had been seen an hour before, gathering wood. His body furnished no evidence of violence, and at the autopsy an extensive hæmorrhagic infiltration of the pancreas was the only essential alteration. This organ was fatty degenerated, but less so than in the previous case. Both individuals were very fat.

The third case was that of an elderly man, also very fat, periodically prone to drunkenness, who was taken dead from the water. The autopsy gave no evidence of death from drowning. Here, too, hæmorrhage and fatty degeneration of the pancreas and blood in the duodenum were found, and marked hyperæmia of the semilunar ganglion was observed. The habits of the individual with reference to the place where he was found favored the idea that his death was not suicidal but due to his falling into the water while in a dying condition.

The loss of blood alone was considered an insufficient explanation of death in these cases, particularly in the first two. Though in the first case the semilunar ganglion was not examined, it was thought as likely that death resulted from shock through nervous action, such as occurs when the abdomen is exposed to mechanical violence.

Attention is called to Fischer's use of Goltz's experiment in the explanation of shock, where paralysis of the heart is produced by blows upon the abdomen of the frog.

Zenker thinks this explanation is favored by the fact that in the second case the heart showed the same conditions as the frog's heart. The immediate cause of death is thus to be regarded as a paralysis of the heart, whether directly or indirectly produced. The medico-legal importance of the examination of the pancreas where sudden death occurs is suggested by the third case.

Congenital Absence of the Kidney.—Watson² noted the entire ab-

¹ Allgemeine medicinische Central-Zeitung, 1874, page 1213.

² Edinburgh Medical Journal, 1874, page 13.

sence of the right kidney and ureter. In the bladder there was no evidence of an orifice for the ureter. The left kidney was lobulated, not enlarged, and was situated close to the brim of the pelvis, in front of the common and external iliac arteries. The left ureter was larger than normal, particularly near the kidney. The left renal artery arose from the bifurcation of the aorta.

In the same article is described an atrophied kidney of the size of a large bean. The left kidney of the same individual weighed nine and one half ounces. The atrophied organ was composed mainly of dense fibrous tissue, with occasional tubes, larger in calibre than the ordinary renal tubules. Well-developed Malpighian capsules were rarely observed. The ureter was pervious at its entrance into the bladder, became fibrous near the kidney, and was lost in the loose subperitoneal tissue before reaching the atrophied organ.

CARPENTER ON MICROSCOPY AND FREY ON HISTOLOGY.

THE demand for a fifth edition of Carpenter's work¹ shows how widely the interest in microscopy has spread. Professor Carpenter is entitled to many thanks for his share in bringing this about, and we are glad that he is reaping a substantial reward. This new edition is a marked improvement on the preceding ones; it is handsomely got up, and is heartily to be recommended to the class for which it is written—amateur microscopists. It is not meant for advanced students, nor for those wishing to study the minute elements of animal tissues, but it is excellent for those who would acquire some general knowledge of structure. It opens the road to almost all parts of the animal and vegetable kingdoms, giving enough information to satisfy those who wish to play and to stimulate those who wish to work. Our criticism on the work as a whole is that too large a portion of it is devoted, not to what is seen, but to the way of seeing it. We do not seriously object to the part on optics, though we think most of it superfluous. We heartily indorse the remarks on the care of the eyes and of the microscope, but we object decidedly to about one hundred pages that have very much the appearance of a compilation from the catalogues of English makers, Nachet being the only foreigner deemed worthy of a place. In a work avowedly for amateurs the description of what the author calls first-class, and what we should call complicated, microscopes is out of place. The tendency is to encourage what we look upon as the bane of almost all the American and English microscopists who have not had, at least indirectly, the benefit of German training, namely, an inclination to make machinery take the place of the educated hand, and to waste time and money on optical effects quite valueless except for test objects. While the followers of this school have been struggling with diatoms and Nobeit's test lines, those

¹ *The Microscope and its Revelations*. By WILLIAM B. CARPENTER, M. D., LL. D. Fifth Edition. Philadelphia: Lindsay and Blakiston. 1875. Pages 846.

using simple instruments have made the discoveries that are revolutionizing science.

Professor Frey's book,¹ which we are glad to see in English, is of quite another nature. It is not for the amateur, but for the student of histology of man and of the higher animals. Kölliker's book, though good, no longer represents the progress of science, and Stricker's Handbook is the only one with which we need compare this work. The former is a series of monographs by able, and, in many cases, by eminent investigators; the latter is a compilation carried up to the present time. In it we miss the conviction, the brilliancy, and sometimes the clearness that characterize many of the monographs, but, on the other hand, the work which is smaller, without being meagre, has an order and completeness that is impossible in a series of disconnected papers. The various opinions on disputed points are fully and fairly presented. The book is in three parts; the first on chemical composition, the second on the structure of the tissues, and the third on that of organs. We are inclined to criticise Frey's definition of a cell, "which consists of a soft mass including within it a peculiar structure." This latter is explained to be the nucleus and nucleolus, which surely are not essential parts. Too much importance is, we think, given to the so-called cell-wall. We are sorry we find the term neurilemma applied to the sheath of Schwann, which envelops the myelin, as this usage tends to confusion. The chapter on the structure of the brain deserves great praise for the large amount of clearly expressed information it contains. The description of the mucous membrane of the stomach embodies the latest researches of Haidenhain and of Rollett. Though for the purposes of reference this work will not take the place of Stricker's Handbook, it is, we think, the best one on this subject for students that we are acquainted with. The translation is very good.

T. D., Jr.

SALTER ON DENTAL PATHOLOGY AND SURGERY.²

THIS is an excellent work, largely original, rich in pathology, clear and concise in description. So far as we are aware, it is much superior to other works of its class which have been published in this country. The position of the author as the official examiner in dental surgery at the Royal College of Surgeons gives weight and authority to his conclusions. Other and more voluminous works on oral surgery have seemed to us to contain much on general surgery which was wholly irrelevant to the dentist.

The pathology and treatment of the teeth comprise a dentist's duties. But a fair general knowledge of the affections of the mouth is also of importance to him.

¹ *The Histology and Histo-Chemistry of Man.* By Professor HEINRICH FREY. Translated from the Fourth German Edition, by Dr. ARTHUR E. J. BARKER, of Dublin. New York: D. Appleton & Co. 1875. Pages 683.

² *Dental Pathology and Surgery.* By S. JAMES A. SALTER, M. B., F. R. S., Member of the Royal College of Surgeons, Examiner in Dental Surgery at the College, Dental Surgeon to Guy's Hospital. New York: Wm. Wood & Co. 1875.

We would instance alveolar abscess, whose ravages are comparable to those of felon, as one of the diseases in which a correct and early diagnosis is most essential to avoid necrosis and deformity. Early and free incisions — abortive, we will call them — often give immediate relief and prevent extension of mischief from the tooth fang to the alveolus. We are glad to see Mr. Salter sustain an opinion we have always held, that the removal of the ulcerated tooth is the only final cure of this affection.

In the chapter on anomalies some curious facts, chiefly old, are given concerning double-sets of teeth, and the occurrence of a third dentition at an advanced age.

Some very interesting pages are also to be found on the relation of the teeth to articulation, and the imperfections in pronouncing certain series of consonants and words due to the loss of incisors and canines.

One of the most important chapters to the surgeon is that on odontomes, or misplaced and hypertrophied growths of dentine. Differing from the original paper by M. Broca, Mr. Salter classifies them as follows: warty growths, hernia of the fang, enamel nodules on fangs, exostosis, dentine excrescence. To many surgeons these peculiar formations may be familiar; we confess they were new to us.

Dentigerous cysts, the impaction of teeth, tardy or painful eruption of the wisdom teeth, neuralgia and even graver affections from difficult dentition, and many other points are dwelt on at length. Cleft palate, which all dental treatises improperly include in their list of malformations, is also treated of here. The dentist's duty in this and some other affections is purely mechanical. On the other hand, too little space is devoted to the effects of hereditary syphilis or scrofula on the teeth.

The tendency of all specialists is to injuriously magnify their office. But on the whole, there is much in this book we can commend to the general surgeon. C.

PETTENKOFER ON THE PREVENTION OF CHOLERA.¹

THAT old and excellent adage, "An ounce of prevention is worth a pound of cure," has never, perhaps, been better verified than by the medical profession, and that with ever-increasing illustration during the last few years. To this the marked results of the efforts of boards of health are constantly bearing witness, a fact, we may say with pride, nowhere better manifested than

¹ *Cholera: How to Prevent and Resist it.* By DR. MAX VON PETTENKOFER, Professor of Hygiene, University of Munich, Obermedicinalrath, President of the Sanitary Commission of the German Empire, etc. From the German. Translated (with Introduction and Appendix on the International Cholera-Conference of Vienna) by THOMAS WHITESIDE HIME, A. B., M. B., etc.; Ex-Royal Scholar, Trin. Coll. Dublin; Lecturer on Obstetric Medicine and Diseases of Women and Children, in the School of Medicine, Sheffield; Medical Officer to the Hospital for Women; Surgeon-Accoucheur to the Public Hospital and Dispensary; Fellow of the Obstetrical Society, London, etc. Revised by Dr. Von Pettenkofer. With Illustrations and a Chart. London: Baillière, Tindall, and Cox; Paris: Baillière; Madrid: C. Bailly; Baillière. 1875.

by the doings of our own State board, of which the late lamented Dr. George Derby was such an active and efficient executive officer.

Notwithstanding this, it is astounding to learn how much more is to be done to prevent disease, and to inform and protect communities. It is only necessary to read certain statistical information — and, amongst other material of this sort, the statements furnished in the valuable little volume under notice — to be almost appalled at the *exposé* of the amount of “preventable disease.” It is alike the glory and the duty of physicians and surgeons to give their best attention and efforts to this subject — *the prevention of disease*.

The translator of this work — Dr. Hime — writes thus, on page 15 of his Introduction : —

“It is often very difficult to get people to realize the necessity or advisability for a measure, the results of which do not immediately strike some of their senses. The frightful loss of life which occurs annually in England, from diseases originating in preventable nuisances, is one of the saddest instances of the truth of this remark.

“Nearly a million of people were killed in England during the ten years 1850–59 by diseases which, without a doubt, are to a great extent preventable, the principal cause of such a loss of life being the reckless pollution of the ground by sewage.”

The English official known as the Medical Officer of the Privy Council says (Thirteenth Report), “It seems certain that the deaths which occur in this country (England) are fully a third more than they would be if an existing knowledge of the chief causes of diseases were reasonably well applied throughout the country ; that of deaths which, in this sense, may be called preventable, the average yearly number in England and Wales is now about one hundred and twenty thousand ; and that of the one hundred and twenty thousand cases of preventable suffering which thus, in every year, attain their final place in the death register, each unit represents a larger or smaller group of other cases in which preventable disease not ending in death, though often of far-reaching ill effects on life, has been suffered.”¹

We have written and cited thus much about the prevention of disease, because the author of the treatise before us insists strongly upon the preventability of both cholera and typhoid fever. To be sure, this is nothing new ; we have all been in the habit of thinking thus for some time ; but it is only more and more apparent, with advancing years, that efforts in the direction of “prevention” cannot be too largely nor too perseveringly made, if we wish to diminish the fearful ravages of disease, of the nature, especially, of those just alluded to.

Dr. Von Pettenkofer does not enunciate anything particularly novel as to the history or treatment of cholera, but his theory as to the influence of locality and soil-conditions upon the production of the disease is not only interesting, but bears within it all the elements of reasonable deduction, acute observation, and sound common-sense. Upon this portion of his work, alone, we base a strong recommendation for its perusal, not only by members of the medical profession generally, but by persons composing boards of health, and by intel-

¹ *Loco citato*, page 16.

ligent communities at large, for we are all concerned in forwarding such measures of hygiene as are suggested by its teachings.

One important point set forth in this volume is the marked influence of what is termed the "ground-water," in various localities. This is best illustrated by the chart which faces the title-page, and which is denominated "A Chart showing the Variation in the Ground-Water and in the Mortality from Typhoid Fever in Munich." The diagram comprises the observations made in these respects between the years 1855 and 1872, inclusive; and this registration is at once remarkable and decisive. Simply stated, it is thus: the higher the "ground-water," the lower the mortality-rate. And the author, as we understand him, would apply to cholera the facts which are true for typhoid fever.

We cannot do better than to quote further, from the editor's introduction and from the author's text, a few sentences which will show the drift and value of the work, which truly deserves a far more thorough analysis than can be given in a mere notice. And thus we may induce a more extended examination of this valuable contribution to the literature of cholera.

"Nothing can be more erroneous than the common idea that the atmosphere ends where the ground begins. The ground is not half so solid as it seems, and currents of gas and water circulate freely through almost any part of it, except the most compact clay and rock."¹ "If a fluid like water can make its way through the ground, it will not be surprising that air, which is seven hundred and seventy times lighter, and more movable than water, should very readily traverse it." From this is argued the facility with which noxious gases filter, as it were, through the soil. "Gravel-soil," says Dr. Hime, is only "semi-solid," and of course it much more readily allows the passage of air and gases than denser earth and the nearly, or quite, impervious moist, clayey soils, which are therefore comparatively, and sometimes wholly, free from objection on this score. "A block of apparently solid gravel contains one third as much air as stone, and a house built on such a foundation is therefore practically resting on a stone support which stands in air." (Hime.) In the winter and spring the "ground-air," being colder than that within our houses, flows inwards and upwards into them; but in summer, the air within, being cooler, flows downwards and outwards, and displaces the "ground-air," drawing it towards the warmer earth surface and outer air. For these reasons, it is counseled to extend the chimneys of the lower stories of houses into the cellars, there to open into "a chamber formed beneath the cellar floor." During autumn, winter, and spring, chimneys thus built will carry away from the houses and the adjacent ground the "foul gases and disease-germs emanating from the soil."

With regard to the influence of the ground-water on the production and aggravation of both cholera and typhoid fever, the translator says, "The reason why variations in the ground-water should assist the development of cholera and typhoid fever is not clear, but a satisfactory solution of the question might be soon looked for, if the undeniable fact of the necessary relationship between these phenomena were generally acknowledged."²

¹ Introduction, page 8.

² Introduction, page 23.

On the same subject (and this is really the distinctive point in the book) Dr. Von Pettenkofer remarks, "Just as in certain places the existence of typhoid fever exhibits a certain temporal dependence on the variations of the moisture of the soil, of the so-called ground-water, in like manner it is probable that cholera is similarly dependent, though, owing to the fortunately less frequent prevalence of cholera, the relationship cannot be so regularly and satisfactorily proved as in the case of typhoid fever."¹ The author has at hand observations of the variations of the ground-water for sixteen years past, "made regularly at Munich." Many other points might be considered; but the most important, having reference to the author's intentions as indicated by the title of his book, has been presented.

The volume is exceedingly well printed, and finely illustrated, and deserves the widest possible circulation.

W. W. M.

REPORT OF THE NORTHAMPTON STATE LUNATIC HOSPITAL FOR 1874.

THE report of Dr. Earle contains some interesting features which we will briefly notice. First, the fact should be known that to this hospital are transferred many chronic cases from Taunton and Worcester, so that nearly nineteen twentieths of the inmates are incurable. Next the large number of commitments is well shown by a table, which gives nearly forty per cent. of readmissions. The total admissions of one hundred and ninety-three patients was no less than three hundred and fifty, owing to the fact that the chronic insane are very properly allowed to live at home, in the remissions of disease, or when their safety and that of the public will allow it. Four pages are devoted to urging the establishment of a State asylum for the legal detention and treatment of habitual drunkards. This subject has been repeatedly brought before committees of the legislature, by hospital officials, during the last fifteen years, without effect. This year a petition with one thousand seven hundred names has been sent in. The report of the Commissioners of Lunacy advocates a State inebriate asylum, and the report of the State Board of Health, it is supposed, will do the same. Let us hope something will come of it.

Dr. Earle also advocates an asylum for epileptics, and regrets the policy of the city of Boston in not erecting a hospital within her own borders, instead of turning off her citizens upon the charity of the State. He says, "That a city of so much wealth, and of such broad philanthropy and beneficence, will long remain without such an institution, to perfect its circle of charitable works, is difficult of belief."

He objects to the size of the contemplated Worcester and Danvers hospitals, adhering to the standard of two hundred and fifty to three hundred beds, as adopted by the superintendents' association some years ago. He shows that the expense need be no greater, if as great, in hospitals of the latter size. He

¹ Page 35.

would build one in each county, if necessity required, making them truly *hospitals*, instead of asylums for incurables merely.

Dr. Earle's record of the facilities furnished for the instruction and amusement of patients, and the amount of work done by them, is as usual detailed and interesting.

SAINT BARTHOLOMEW'S HOSPITAL REPORTS.

THE report for 1874 has been published, the tenth volume in the series. There are thirty papers in this volume, including many of value. We have not had time to read them all, and the list is too long for publication. We cannot help, however, calling especial attention to some remarks upon typhoid fever, because of certain observations upon the subject of temperature. This matter is as yet far from being well understood; the hours of maxima and minima are apparently lawless. In the cases reported, the thermometer was used almost hourly; on no single occasion did eight o'clock in the morning give the minimum, or six o'clock in the evening the maximum. Far from it. The discrepancies were very great, nor would they have been less had other hours been chosen.

Further on are reports of cases of rheumatic fever with high temperature, which are interesting in the same connection. In two of these cases the temperature reached 108.6° and 107.6° respectively, yet the result was recovery.

A case of recovery from acute Bright's disease, treated by sulphurous acid and vinegar, may lead some reader to try a new remedy in what we generally look upon as an almost hopeless affection. The usual number of interesting medical and surgical cases fills up the volume of over four hundred pages.

ZIEMSEN'S CYCLOPÆDIA.¹

ON the appearance of the first volume of the translation of Von Ziemssen's Cyclopædia, we took occasion to recommend the work to our readers as one of great value, and to express our confidence that the succeeding volumes would equal the first in merit. In this belief we have not been disappointed, so far as the second volume is concerned, which is a continuation of the first, on *Acute Infectious Diseases*, and contains articles on *Varicella*, *Measles*, *Rubeola*, and *Scarlatina*, by Professor Thomas, of Leipzig; *Small-Pox*, by Professor Curschmann, of Berlin; *Erysipelas*, *Miliary Fever*, *Dengue*, *Influenza*, and *Hay Fever*, by Professor Zuelzer, of Berlin; *Malarial Diseases*, by Professor

¹ *Cyclopædia of the Practice of Medicine*. Edited by Dr. H. VON ZIEMSEN, Professor of Clinical Medicine in Munich, Bavaria. Vol. II. *Acute Infectious Diseases*. ALBERT H. BUCK, M. D., New York, Editor of the American Edition. New York: William Wood and Company. 1874.

Hertz, of Amsterdam ; and *Epidemic Cerebro-Spinal Meningitis*, by Professor Von Ziemssen. Like the first volume, this is prefaced by a short bibliographical sketch of the writers, by the editor. We have nothing to say in regard to the articles which it contains, save that they are written in the same careful and conscientious manner as those of the first, and that they will be of great value to the general practitioner.

MEDICAL ADVERTISING.

THIS subject has been freely discussed of late in the medical journals of this country and of England. It appears to have become a rapidly growing evil, and one which all classes of medical men have been guilty of to such an extent as to call for a decided expression of public opinion. We do not, of course, allude to that barefaced method of extolling one's own virtues which is commonly employed by the charlatan. The object is accomplished in a more guarded and insidious, and therefore, probably, more effective manner. The methods used are various. One form of this evil is severely commented upon by a French reviewer as follows: "For some time past English literature has become enriched by a large number of medical works, of which the object is not always the advancement of science and the search after truth. Many of these works are nothing but touting for patients—a kind of costly but paying advertisement, which their authors allow themselves to put forth in order to attract the attention of the lay public. . . . Thus every day we receive from them a large number of books for criticism, which we take good care neither to read nor to analyze, and of which the first page sufficiently shows the idea which has inspired the composition of the book." The practice of advertising in the newspapers medical books which were avowedly written for medical readers is, we understand, largely resorted to in England; in this country, so far as we are aware, such advertisements are rarely seen. Of the former class, however, namely, of books written on medical subjects and addressed to the public, or intended largely for public perusal, we have seen numerous examples lately. Within the last ten years medical book writing has increased so rapidly in this country, and the business has grown to such dimensions, as to offer an attractive field to all enterprising members of the profession of this class. We have little sympathy for those medical writers who appear in print less with a desire to add anything of value to medical science or medical literature than with the hope of calling the attention of their brethren to their own individual merits; but what shall we say of those who take advantage of the powerful weapons placed at their disposal to pry their way burglariously through the obstacles in the path to public favor, and pocket the results of a policy so lucrative and tempting, but so damaging to medical morals? Such customs, into which no inconsiderable number of physicians are surely drifting, not only lower greatly the dignity of the profession, but also are extremely discouraging to all hard-working, honest, and modest men. Such practices are doubtless chiefly confined to large cities

like New York and London, where the temptation is great and a happy hit is sure to be followed by large returns in the shape of a handsome professional income. It is a weak point in our system of professional morals, and one to which the tendencies of the age give great encouragement. The readiness with which members of the profession in New York allow their names and work to appear in the daily papers has long been a matter of general comment, but an instance has lately occurred in that city which far outstrips anything we remember to have seen or heard of before. The members of a New York society enjoy the unenviable privilege of having listened to a paper, which subsequently occupied several columns of a daily paper, wherein the merits of the writer were extolled at the expense of his fellow-practitioners, and indeed of medical science in general. Such a case is but the natural result of looseness in matters pertaining to medical ethics, and shows forcibly the danger of the slightest departure from strict rules. We are glad to see that the medical journals have taken the matter in hand, and we hope that in the particular instance alluded to there will be such a decided expression of feeling against all practices which encourage cases of this sort, that it will be found not to pay to help one's self by any other than well-recognized legitimate methods.

DR. TYLER'S ADDRESS ON THE POMEROY CASE.

WE have received a printed copy of Dr. Tyler's address to the governor and council in favor of commuting the sentence of the boy murderer, Pomeroy. In accordance with what we think our solemn duty, though much against our inclination, we offer our deliberate protest against it. We regret that the address is not the careful and impartial summing up of the conflicting arguments in this most difficult case, which we should have expected, but a very one-sided statement. Everything showing Pomeroy's sanity is put back, everything showing his insanity brought forward, and there appears to be at least one attempt to lead the unprofessional mind from the paths of reason into those of sympathy. Dr. Tyler says, "He has lost the use of one eye, which he says is the result of vaccination;" even if this extraordinary occurrence is true, we have yet to learn that the loss of an eye makes the sufferer irresponsible. We must also criticise the conclusions drawn from conversations with the prisoner. Let the reader imagine himself in the position of the latter, his life in danger, and an expert on insanity questioning him as to his motives. What is he to say? He answers, "It *seems* I did so;" "I *had* to." Could he answer better? Can we expect him to confess he did it for sport? Even if he did, we imagine that insanity would be alleged. Dr. Tyler a little later speaks as follows: "None of the usual incentives to crime appear in this case; no offense had been taken, no grudge, no envy felt, no hope of gain or advantage appears, no lust; nor is it believed that the boy had been ugly, cruel, or bad." Can we be quite sure that there was no lust, that no perverted sexual appetite may have been one among other agents? Was it not stated, in

evidence for the defense, that the boy was always cruel, and took delight in torturing animals? Finally, can we not show a "reasonable and satisfactory external motive?" The love of admiration is strong in the young; we have here a boy hard and cruel to a remarkable degree, who is deeply read in "dime novels" abounding in scenes of blood and crime. Dickens, with his deep knowledge of human nature, points out the error we commit in being surprised at the apparent ecklessness with which certain criminals offend public opinion, and shows that they are pandering to the public opinion of their own wicked associates. Sir Mulberry Hawk is cited as an instance: "his world was peopled with profligates, and he acted accordingly." To such a boy as we have described, the desperado is a gallant warrior, the executed felon a glorified martyr. His conscience, never keen, becomes still duller. To show power, to inflict pain, to spread terror by a series of undiscovered outrages, is to him the highest career; and it is hardly a misfortune to fall a victim to numbers, to meet his accusers boldly, to be the central figure of a great drama, to have his fame spread throughout the country as the bewilderment of experts and the embarrassment of the executive, and, if need be, to "die game," an object of admiration as well as of horror. Such may be the effect of bad reading upon a bad nature. Those familiar with youthful crime know that such cases are far from rare. The criminal's state of mind may be called morbid, but the following vital facts must not be overlooked: he knows that his course is wrong, he pursues it of his free will, and he conceals his crimes to escape punishment. All this is true of Pomeroy, and in our belief he is accountable before God and man.

ABSENCE OF THE URETHRAL CANAL IN A NEW-BORN INFANT.

DR. C. JACQUART reports to *L'Union Médicale* of March 11, 1875, a very interesting case of congenital imperforation and absence of the urethra in a new-born infant. He states that at midnight of October 24, 1874, a woman was delivered of a male child which appeared to have all the external signs of perfect conformation, and nothing abnormal was noticed by the physician in his attentions to the child. The next day the infant was carried to a nurse ten kilometres from the city. On the following day the nurse was disturbed by the incessant cries of the child, but could not discover their cause. On the third day, the 27th, she noticed that the diapers had been soiled by fecal matter only, and that the infant had not urinated.

Dr. Jacquart was summoned in haste, and arrived about three P. M., to find the child very ill, with feeble pulse, pinched features, and uttering loud, pitiful, and continual cries. Sixty-four hours had elapsed since his birth, and no passage of urine had been effected. An examination of the penis showed complete closure of the meatus urinarius, of which neither form nor place was apparent. The glans, slightly uncovered, was wholly without depression, and the prepuce was intimately adherent to the glans at its lower three fourths. There was need of immediate interference, and yet, a novice, Dr. Jacquart

found himself, all unprepared, called upon to perform an operation which he had never seen nor heard of. He proceeded as follows: He made a longitudinal incision in the direction, and at the usual place, of the meatus, hoping to find the urethra, and thinking to have only a case of imperforate meatus; but he was disappointed, and having met with no success, he plunged in the supposed direction of the urethra the blade of a straight-pointed bistoury. He sounded the wound he had made with a blunt stylet, hoping to find some index to direct his course.

Finding no passage, and seeing that the danger to the infant was every moment increasing, he decided to make a passage at any cost. He bent a grooved stylet into the form of a sound, and pushed it slowly, but with sufficient force, through the wound already made, in the direction of the absent canal. He became convinced that his efforts were with every advance of the instrument overcoming the difficulty which was constantly encountered, and that the proper path was being followed. Finally the bladder was reached, but not a drop of urine came. Not having a sound sufficiently small, he bent the stylet anew, so as to use the groove as a sort of conduit, and finally succeeded in his purpose. A large quantity of urine flowed along the groove of the sound, and the infant was speedily relieved.

The following day the child had passed no urine, and Dr. Jacquart was obliged to perform in part the operation of the evening before. Some adhesion had taken place of the artificial meatus and walls of the urethra. Accordingly he permitted a very fine bougie to remain, for the purpose of keeping apart the fresh surfaces and preventing their adhesion. The child urinated in spite of the presence of the bougie, which after a few days was removed, and urination was normally performed. The cure was permanent. No attempt was made to separate the prepuce from the glans, the parts being very firmly adherent. The quantity of blood lost in the operation was moderate.

The above was a case of imperforation, not only of the meatus urinarius, but of the entire canal, as was abundantly proved by the difficulty of introduction of the sound even to the bladder. The meatus was completely absent, but it seemed to Dr. Jacquart that the walls of the urethral canal were only strongly adherent, and that they in reality existed.

CASES OF SYPHILIS WITHOUT MERCURIAL TREATMENT.

UNDER the heading of Clinical Contributions to Syphilidology, Drs. Van Buren and Keyes report two interesting cases to the *Archives of Dermatology* for January, 1875. The first was that of a physician who while a student got a small, insignificant primary sore. By advice of a medical friend he took no medicine. A slight papular rash appeared. For this he physicked himself with laxative medicine, but took no mercury. The rash disappeared and was not followed by a successor. His health remained perfect. Nine years after the chancre a node appeared upon the cranium. This caused no uneasiness, its

nature not being suspected. The node remained hard, solid, untreated, for *eleven years*, the general health continuing vigorous; but now the patient became prostrated for several weeks by a sickness which had no connection with syphilis, and on recovering from the attack the node softened. After being opened the edges sloughed extensively, leaving the bone bare over a circular area of more than two inches in diameter. At the time of the patient's visit the necrosis had been visible for nearly a year; its nature had been suspected, but he had employed no specific treatment. Pus had burrowed under the scalp for several inches posteriorly.

The second case was that of a man who acquired a slight urethral discharge as his first venereal malady. This was followed by double epididymitis, and purulent urethritis, from which he slowly recovered. He had no other symptoms and took no mercury. In one year he married, and had a healthy child. His wife never conceived again, but remained well. Twelve years after his urethral chancre — as it probably was — some ecchymatous spots appeared upon the patient's legs. Suspecting their nature he went to a specialist of distinction, in venereal disease for treatment. Under the use of arsenic the "boils" disappeared, and their sites were occupied by pigmented scars entirely characteristic of antecedent syphilitic lesion. One year later the patient ran down in general health, became yellow and thin, lost the power of reckoning, had hemicrania and double vision, loss of memory, and many evidences of failing brain power. He was sent to Europe for threatened softening of the brain, and was told in Paris by a distinguished practitioner that his symptoms were due to threatened apoplexy. Most of his nervous symptoms having disappeared, he returned to America. After some months his present symptoms developed, namely, tertiary gummy infiltration of the soft palate, with rapidly advancing destructive ulceration, for which he now applied for treatment, not suspecting its nature. Improvement commenced at once and advanced with great rapidity under the iodide of potassium.

The reporters state that these cases are full of food for thought. The facts of the second case may be defectively stated, since the patient had brain symptoms and his memory may not be trustworthy. He may have had, after his urethral chancre, some eruption which was not noticed, or was forgotten; but still here are two individuals with infecting chancre, neither of whom gets mercury. The one has one mild symptom, the other nothing that he can remember; both are cases which, according to Diday, should get no mercury, yet both have disastrous sequences.

The following conclusions are drawn from the cases: 1. The evolution of syphilis may be mild and regular, even when no mercury is used early in the disease. 2. With the mildest beginning in syphilis, untreated, the most terrible consequences may occur after years of quiescence. 3. The severity of tertiary lesions does not depend upon previous use of mercury. 4. The efficacy of the iodide of potassium, properly employed, is not dependent upon a previous use of mercury. 5. A father with syphilis may have a perfectly healthy child.

MEDICAL NOTES.

— Dr. D. W. Cheever has been appointed Professor of Clinical Surgery in the Faculty of Medicine at Harvard University.

— As will be seen by the announcement published among the advertisements, the medical department of Harvard University has taken another step forward. It has established an examination for admission; and on and after the beginning of the school year of 1877 no student will be admitted to the classes without passing it, except such as can present a degree in letters or science from a recognized college or scientific school. The requisites for admission cover but a small field and are not exacting in extent, but they embrace that amount and kind of acquirements which are essential to the study of medicine and insure, moreover, some degree of preliminary mental training.

The school has attained such a position of success that it can safely venture upon this additional step in the reform of medical education. Of its importance to the student and to the profession there can be no question.

— The *Medical Press and Circular* states that the London Hospital Sunday is now a success. As much cannot be said for Hospital Saturday, which movement has proved too costly, and is not popular with the profession, since it is supposed that artisans and operatives in the receipt of good wages may in future, by a small subscription, consider themselves entitled to medical relief in times of sickness, and behave rudely to medical men performing onerous and unpaid services. The whole system of London medical charities is under discussion, and something like a revolution is required to make medical charity at all compatible with the interests of those medical men in London who desire to live by their profession.

— We learn from the *London Medical Record* the following facts concerning the Swiss medical faculties. Each of the three universities at Bâle, Berne, and Zurich, possesses a faculty of medicine. German is the language in use at these universities; but a fourth faculty has just been founded at the University of Geneva, where French is the medium of instruction. At Bâle there would seem to be considerable difficulties in the way of anatomical teaching, since the law only allows the dissection of suicides and persons who die in prison. What is known as the polyclinic does not exist there. This institution, which is common to the other Swiss universities and the majority of German universities, to a certain extent resembles our out-patient departments, as by its instrumentation advice is given to out-patients. But this system is there supplemented by the students being sent to the homes of these patients when necessary, under the directions of the principal physician in charge. Instruction is given in the Swiss faculties by ordinary and extraordinary professors named by the college of professors, and appointed by the cantonal government, which defrays all the expenses of the university, and by free professors (*privat doctentes*), authorized under certain conditions to hold courses, remunerated exclusively by the pupils, which strengthen and complete the official teaching. The Swiss faculties of medicine, notwithstanding their justly earned repute, for they have reckoned amongst their professors Lebert, Billroth, Griesinger, Schiff, Liebermeister, etc., have very few students; there

are scarcely two hundred at Zurich, one hundred and fifty at Berne, and seventy at Bâle. The grades obtained in any of the universities do not immediately confer the right of practicing medicine throughout Switzerland. As a rule, each canton grants the right of practicing in its territory to the doctor who has obtained his diploma only after he has passed special examinations before a jury named *ad hoc* by the communal authorities.

— Our readers may remember the notorious quack Tumblety, who figured in this city many years ago. One of the same name, styling himself "the great American doctor," has lately been brought before a coroner's jury at Liverpool, England, on the charge of administering a poisonous mixture to a patient. He escaped with a strong censure from the jury, who, however, did not take steps to ascertain his real medical standing.

SURGICAL OPERATIONS AT THE BOSTON CITY HOSPITAL.

[SERVICE OF DRS. HOMANS AND INGALLS.]

THE following operations were performed during the week ending Friday, April 9, 1875:—

1. Tumor of palate. 2. Recto-vaginal fistula. 3. Tumor of finger. 4. Labial abscess. 5. Palmar abscess (two cases). 6. Amputation of toe.

1. *Tumor of Palate.*—The patient was a young and healthy man. He first noticed the tumor four or five years ago. There has been a slight pain in it at times, and lately it has discharged a little bloody pus. The growth was attached by a broad base to the right side of the palate, and filled the roof of the mouth. It was soft, irregular, slightly movable, ulcerated in one spot superficially, and free from the gum. The patient having been etherized, and Smith's gag applied, Dr. Homans seized the tumor with a vulsellum, and quickly removed the whole growth with a pair of long, curved scissors. The hæmorrhage was free, but it was easily checked with ferric alum.

The growth was loosely attached to the hard palate, and there was a small opening into the right inferior meatus. There had never been any discharge from the nares, nor had they ever been obstructed. The microscope showed the growth to be made up of fibres and multitudes of nucleated cells, similar to those of a large round-celled sarcoma.

2. *Recto-Vaginal Fistula.*—The patient was a young woman, and the fistula was the result of a syphilitic stricture of the rectum, which made its first appearance about a year ago, according to the patient's account. The fistula was just above the external sphincter ani, the vaginal orifice being on the left, near the posterior commissure. It had been treated by caustics, injections, division of the external sphincter ani, and by a plastic operation. It remained closed a short time after the latter operation.

Dr. Homans passed a director through the fistula, and divided all the tissues that bridged it over, as in the common operation for fistula in ano; and the subsequent treatment will be the same as in an ordinary anal fistula.

GEO. W. GAY, M. D.

PATHOLOGICAL STUDY IN VIENNA.

MESSRS. EDITORS, — Several weeks ago a gentleman connected with the University of Vienna happened to mention to me a remark of Professor Stricker, that medical education in America was spoiled by the fact that money-making was the main object of the profession there, though he had heard that a beginning had been made in Boston, where an "embryo" medical university had been started. This remark, made probably in casual conversation, needs no comment from Americans, who know the advantages they enjoy at home, which perhaps a foreigner cannot be expected to have heard of. Those, however, who are acquainted with Vienna may be pardoned for expressing surprise that the Viennese professor of experimental pathology sought for examples of money-making medical instructors so far from his own city.

But perhaps it may be of benefit to those now studying at home, and planning a trip abroad, to hear of the scientific advantages now offered in Vienna. Several Americans went here last winter, thinking that in the great medical centre there would at least be fair instruction in pathology, sharing also a belief not uncommon at home that the German mind is inspired with undying zeal in investigation, and that pathology can be learned from German lips only. One American had even left his course unfinished at one of the best medical schools in America, seeking apparently a "scientific" training before finishing his practical one at home.

It would be well if the exact state of the case were understood. Fine as the clinical advantages are in Vienna in most branches, the opportunities for scientific research are far from being what they should be. Pathology is not well taught, and microscopical pathology is not taught at all. There is no room for the microscopical examination by students, either by beginners or by those who are advanced, of the rich pathological material afforded by the hospital. Speaking only of that "embryo" school in America of which I have any knowledge, I am sure a student has better opportunities for instruction in pathology in Boston, although the material is small, than in Vienna. The autopsies are necessarily made hurriedly, with no attempt at demonstration. The most interesting specimens are collected, and shown by the assistant in a private course on gross pathology. This is excellent as far as it goes, but the demonstration is by no means thorough; it is satisfactory only to one who, being well grounded, is anxious to see a great variety of specimens, or to one who is content with a very general idea of pathology. There are two laboratories where histology can be studied, one where instruction is given in histology and embryology. Special work can be done in Professor Stricker's laboratory; but I have been told by persons who worked there that the instruction was not such as could be desired. In none of these laboratories, however, is it possible to make use of the material of the pathological department.

My own experience may serve as an illustration. With a friend I tried to find a course on the microscopical pathology of tumors. None was advertised, but we made inquiries of a number of the "docents," who referred us to the assistant at the pathological department as possibly willing to give private instruction. This he refused to do, but stated that in a month the second

assistant might be able to; for the present, however, he could not, as he had no microscopes, and his time was entirely occupied in passing his graduating examinations. A request that we might examine with our own microscopes, without demanding instruction, such material as would otherwise be thrown away, was not granted. We were told that nowhere else in Vienna could instruction be given in microscopical pathology where there was any material at hand. This we found to be the case, though we applied at two of the histological laboratories, and to Professor Billroth's assistant and to Professor Wedl.

It is but just to say that there is a prospect of a change in Vienna when a new professor of pathology is appointed. When that will be, or if a proper man will be found for the position, is as yet uncertain. So much so that those gentlemen now studying in the "embryo" schools in America had better make full use of their opportunities in pathology at home, and not expect to find much in the great university in Vienna.

STRASBOURG, March 7, 1875.

LETTER FROM KNOXVILLE, TENNESSEE.

[FROM AN OCCASIONAL CORRESPONDENT.]

MESSRS. EDITORS,—In prefacing some observations upon the diseases of negroes, I will state that in East Tennessee the effects of slavery were less unfavorable in almost every respect, than in the more southern States. The climate and the nature of the soil were such as to render it impossible to keep large numbers of negroes on one farm or plantation. In fact, there was no profit in the institution, and slaves were kept because there was no other system of labor more feasible. Each family on a farm kept enough for the performance of its business, and dwellers in the towns a sufficient number to do the work in and about the house. Scarcely any but refractory slaves were sold, and hence the negroes grew up and lived in one place for a life-time.

They were generally well cared for, and, being mostly with their owners in the field or house, they became far superior to the average slave population in the South.

Emancipation caused the first scattering among them, and for obvious reasons great numbers congregated in Knoxville. Many of the able-bodied men enlisted in the Federal army, but returned after they were mustered out. The year 1865, then, found hundreds of families in and about this city. Many had become demoralized and physically diseased, from various causes, prominent among which was their association with the army. Venereal diseases were common in both sexes; and from exposure to cold and damp, other diseases preyed upon their systems. The proportion of mulatto children born within the last twelve years is great. A full-blooded negro is not so often seen as one would naturally expect and the bleaching process still goes on. It is an obvious fact that the mixed bloods are slender and incapable of resisting disease. The yellow negroes are very liable to contract pneumonia during

the winter and spring months, which either proves fatal in a short time, or goes on into a chronic form, till death ensues before autumn.

Menstrual derangements are very commonly met with. Exposure to cold and damp at the period causes suppression and its consequent ills. Menorrhagia, also, is common among the middle aged-women. Very often we meet with cases in which the usual menstrual flow will continue for ten or more days, and be followed by leucorrhœa, which is seldom absent at any period during the month. We find much suffering from dysmenorrhœal pains, associated with ovarian neuralgia. There is a tendency to fatty and other degenerations of tissue in various parts of the body. Uterine tumors of a polypoid character are often found, and thickening of the parietes of the womb is frequently observed. Ovarian tumors are common, and the tendency is to a development of this morbid condition, because of carelessness during menstruation. There is a colored woman still living in this city, from whom the entire uterus was removed about twenty years ago.

Great numbers of premature births occur among the colored women. Quite a proportion of the children that are born at term die within the first two years. Some succumb to neglect and want of proper nutrition.

In "slave times," the owners gave attention to infants, and rendered prompt aid to nature in the rearing of children born of the negro women. Now, the sole care devolves upon the mother, who is ill fitted to nurse a sick infant, while laboring for her own subsistence and for that of her family. The number of illegitimate children born of colored mothers is greater than most people suppose. The looseness which was proverbial in former times still obtains to a great extent. The question of paternity is one that, in too many instances, will remain forever unsolved.

Tabes mesenterica, enlargement of the cervical glands, and chronic cutaneous diseases, are very common among the children under ten years of age. Measles and other exanthemata often assume a severe and fatal form, for the reason that there is indifferent care, and also because the vital forces are feeble. Parturition in the blacks is generally easy. Few if any instances of deformed pelvis can be found, and labors are seldom prolonged beyond the normal duration.

Puerperal diseases are not so often met with as would be supposed. The women lie in bed more patiently, after confinement, than the whites in a corresponding condition of life, but we often find cases where involution has been deficient, and the womb left in a thickened condition, with the cervix and os much hypertrophied, and the woman a subject of uterine leucorrhœa. Absorption is not so readily accomplished, by reason of the softness of tissue, or lack of firmness. Hence prolapsus is often met with. Such cases are readily cured by appropriate medication, but many patients are not able to be properly treated, or continue to suffer indefinitely before they apply for medical aid.

The colored girls menstruate at an early age, many being no more than eleven or twelve, if healthy and well-nourished. There are some who, by reason of scrofulous habit or of tuberculous diathesis, do not menstruate till the age of fifteen, and occasionally we find a case where a cough sets in at the age of puberty, and the function is never established; decay progresses, and the

girl sinks into the grave from some chronic disease. Such are more frequently found among the light mulattoes, who have a hereditary taint in the system.

The blacks are generally good patients, willing to take the medicines prescribed, and reposing implicit confidence in their physicians. Accustomed when slaves to have medical aid called without being required to pay the bill, they now in most cases act as if they expected others were ready to assume their pecuniary responsibilities.

Among the peculiarities in the negro is a freedom from granular disease of the eyelids, or trachoma. Dr. S. M. Burnett, of this city, who has devoted much time to the study of diseases of the eye, informs me that he has not met with a case, and that he considers the fact as one of race. Climatic causes would operate to produce it in the blacks, for it is common in the whites. The formation of fibroid tumors in the lids is very common, and excision is frequently performed.

F. K. BAILEY, M. D.

KNOXVILLE, TENNESSEE, *March 20, 1875.*

WEEKLY BULLETIN OF PREVALENT DISEASES.

THE following is a bulletin of the diseases prevalent in Massachusetts during the week ending April 17, 1875, compiled under the authority of the State Board of Health from the returns of physicians representing all sections of the State:—

Bronchitis, rheumatism, and pneumonia prevail in all parts of the State.

In Berkshire, membranous croup and whooping-cough have a local prevalence. There is very little scarlatina, measles, or diphtheria.

In the southern parts of the Connecticut Valley section, intestinal disorders are very common. Huntington reports a fatal case of meningitis, Holyoke a mild case of small-pox, and Greenfield a few cases of diphtheria. Influenza is prevalent in this section.

In the Midland section, influenza, diphtheria, and measles are common. Scarlatina, though not generally prevalent, has in some parts a special local severity, as, for example, in Boylston.

The Northeastern counties are unusually exempt from diseases of an acute nature. Scarlatina and whooping-cough are reported as prevalent in some parts, but they are less so than a week ago. The cases of small-pox in Reading have not extended, and only one now remains.

In the Metropolitan district, measles, with its associate, "German measles" (rubeola röteln), persists as a quite general epidemic. In other respects, there is little worth noting with regard to the prevalent diseases in this section. Scarlatina is subsiding. Hyde Park reports one fatal case of small-pox.

In the Southern counties, influenza and whooping-cough have an extensive prevalence, in addition to bronchitis, rheumatism, and pneumonia.

Scarlatina and measles continue to have their field of maximum prevalence in Boston and its suburbs; whooping-cough is most rife on the Cape; and Worcester County has most of the diphtheria.

F. W. DRAPER, M. D., Registrar.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING APRIL 10, 1875.

	Estimated Population.	Total Mortality for the Week.	Annual Death-rate per 1000 during Week.
New York	1,040,000	572	29
Philadelphia	775,000	334	22
Brooklyn	450,000	185	21
Boston	350,000	163	24
Providence	100,000	30	16
Worcester	50,000	18	19
Lowell	50,000	21	22
Cambridge	44,000	26	31
Fall River	34,200	21	32
Lawrence	33,000	22	35
Springfield	33,000	4	6
Lynn	28,000	19	35
Salem	26,000	6	12

MILITARY APPOINTMENT. — Dr. Horace E. Marion, of Boston, appointed Assistant Surgeon of the Fifth Regiment of Infantry, M. V. M., *vice* Sawyer discharged by reason of change of regimental commander, passed a successful examination before the Board of Medical Officers, M. V. M., April 15, 1875.

EDWARD J. FORSTER,

Surgeon Fifth Regiment of Infantry, M. V. M., Recorder of Board.

DR. WILLIAM F. SOUTHARD, Surgeon of the Second Corps of Cadets, M. V. M., resigned his commission and was discharged April 16.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The annual meeting will be held on Saturday evening next, at half past seven o'clock, in the rooms on Temple Place. The election of officers for the next year will be the special business, and the following papers will be read: On a Curious Result following Cicatrix of the Membrana Tympani, by Dr. C. J. Blake; On Necrosis: Removal of the Sequestrum by Decomposition, by Dr. D. H. Parker; On Extrophy of the Bladder, by Dr. Henry J. Bigelow; and A Case of Myalgia, by Dr. G. H. Lyman.

THE BOSTON SOCIETY OF THE MEDICAL SCIENCES will hold its regular meeting on Tuesday, April 27th, at Dr. J. Orne Green's, No. 12 Beacon Street.

APPOINTMENTS. — Drs. G. G. Tarbell and C. B. Porter, of Boston, and Dr. Azel Ames, Jr., of Wakefield, have been appointed examining surgeons of the United States Pension Bureau, *vice* Drs. J. B. Treadwell, H. Doherty, and H. Chase, of Boston, discharged.

Dr. S. A. Green has been reappointed city physician, and Dr. C. Irving Fisher port physician, of Boston.

SPECIAL ANNOUNCEMENT. — At a meeting of the delegates appointed from the Suffolk District Medical Society to attend the session of the American Medical Association at Louisville, May 4, 1875, it was announced by authority that to all delegates from New England the price of round-trip tickets from Boston is reduced by special arrangement to less than forty dollars, without restriction as to time of return.

MASSACHUSETTS MEDICAL SOCIETY. — A new edition of the complete catalogue of the Fellows of this society is in preparation, and will be issued at the time of the annual meeting, in June. Any Fellows who have received circulars or letters of inquiry which they have not yet answered are requested to return replies at once. The editor of the catalogue, Dr. H. Tuck, 24 West Cedar Street, Boston, will be glad to be notified of any errors or omissions in the last edition of this catalogue, published in 1870.

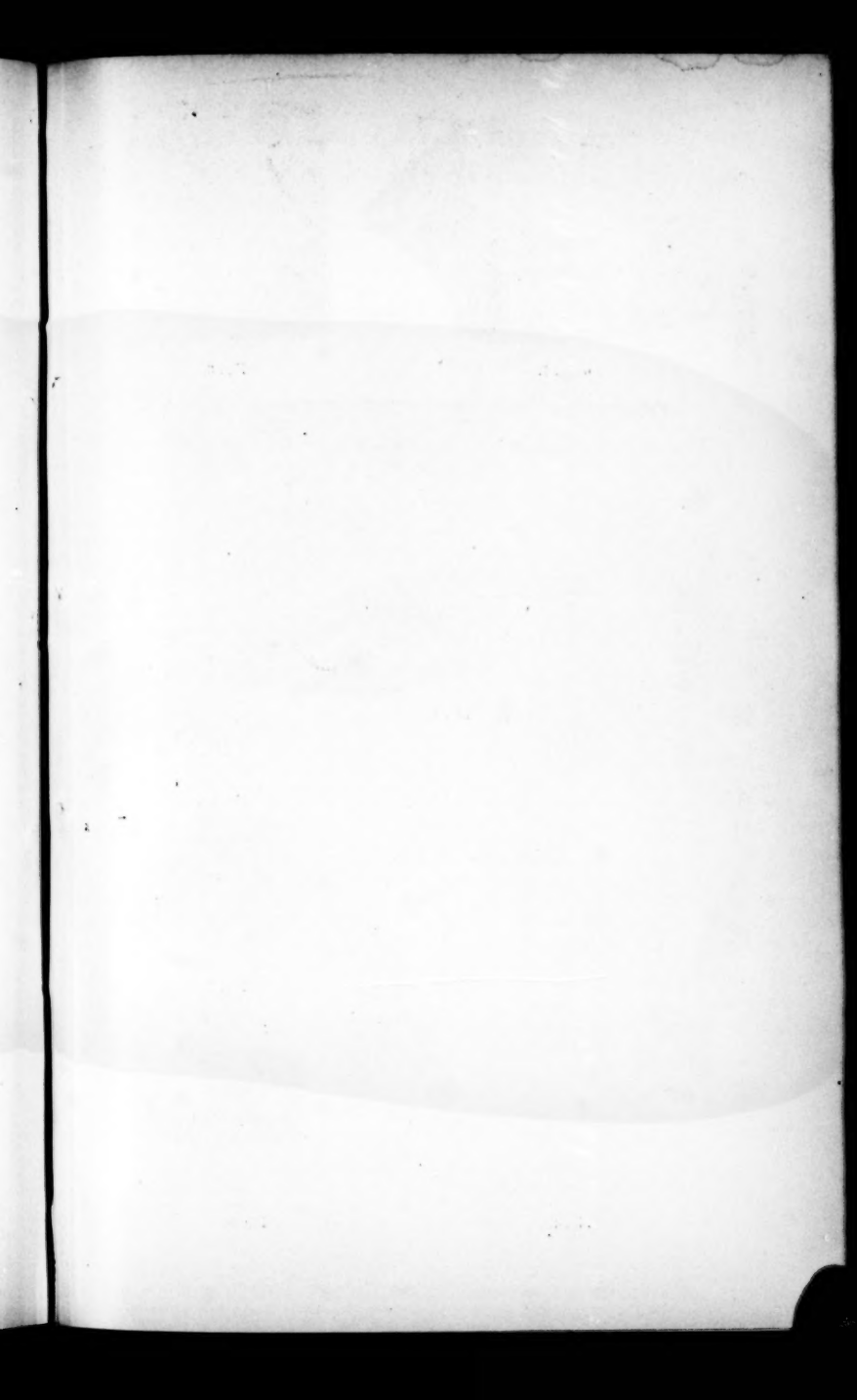




Fig. 1.



Fig. 3.



Fig. 2.



Fig. 4.



Fig. 5.



Fig. 6.